

WHAT IS CLAIMED IS:

1 1. For use in a wireless network, a distributed
2 architecture for the reception of signals transmitted from one
3 or more mobile stations, comprising:

4 a plurality of base transceiver stations for receiving
5 said signals;

6 a Code Division Multiple Access (CDMA) detector in
7 each said base transceiver station; and

8 a combiner in each said base transceiver station for
9 combining a first signal received by a target Base transceiver
10 station with signals transmitted to said target base transceiver
11 station by said plurality of base transceiver stations.

2 2. The distributed architecture as set forth in Claim 1
3 wherein each said base transceiver station further comprises an
4 encoder for producing a symbol based on an output from said CDMA
detector.

1 3. The distributed architecture as set forth in Claim 2,
2 further comprising a decoder for decoding a received said
3 symbol.

1 4. The distributed architecture as set forth in Claim 2,
2 wherein said symbol further comprises encoded elements
3 correlating the strength of said second signal received by said
4 target base transceiver stations with the expected strength of
5 said signal.

1 5. The distributed architecture as set forth in Claim 1
2 further comprising an error detector for determining the error
3 count when said first signal and encoded second signals,
4 received from non-target base transceiver stations, are
5 combined.

1 6. The distributed architecture as set forth in Claim 1,
2 further comprising a reverse link power control for notifying
3 said mobile station to increase power if error count is high.

1 7. The distributed architecture as set forth in Claim 1,
2 further comprising a reverse link power control for notifying
3 said mobile station to decrease power if error count is low.

1 8. A wireless office network, comprising:
2 a mobile switching center;
3 a plurality of Base Stations each comprising a base
4 station controller and at least one base transceiver station;
5 a backhaul network for connecting said mobile switching
6 center with each said Base Station Subsystem; and
7 a distributed architecture for the reception of signals
8 transmitted from one or more mobile stations, comprising:
9 a plurality of base transceiver stations for
10 receiving said signals;
11 a Code Division Multiple Access (CDMA) detector in
12 each of said plurality of base transceiver stations; and
13 a combiner in each said base transceiver station
14 for combining a first signal received by a target base
15 transceiver station with signals transmitted to said target
16 base transceiver station by said plurality of said non-
17 target base transceiver stations.

1 9. The wireless office network as set forth in Claim 8
2 wherein each said base transceiver station further comprises an
3 encoder for producing a symbol based on an output from said CDMA
4 detector.

1 10. The wireless office network as set forth in Claim 9,
2 further comprising a decoder for decoding a received said
3 symbol.

1 11. The wireless office network as set forth in Claim 8,
2 wherein said symbol further comprises encoded elements
3 correlating the strength of said second signal received by said
4 target base transceiver station and the expected strength of
5 said signal.

1 12. The wireless office network as set forth in Claim 8
2 further comprising an error detector for determining the error
3 count when said first signal and encoded second signals,
4 received from non-target Base transceiver stations, are
5 combined.

13. The wireless office network as set forth in Claim 8, further comprising a reverse link power control for notifying said mobile station to increase power if error count is high.

14. The wireless office network as set forth in Claim 8, further comprising a reverse link power control for notifying said mobile station to decrease power if error count is low.

1 15. For use in a wireless network, a method for receiving
2 signals transmitted from one or more mobile stations, comprising
3 the steps of:

4 detecting a baseband signal from a mobile station at
5 a plurality of base transceiver stations, one station being a
6 target base transceiver station;

7 producing a symbol based on a detector output
8 determined from said baseband signal received at each non-target
9 base transceiver station;

10 combining said non-target base transceiver station
11 symbols with said target base transceiver station symbol; and

12 sending a power adjustment signal to said mobile
13 station.

14 16. The method as set forth in Claim 15, further comprising
15 the step of:

16 sending a code pattern for said mobile station to each
17 non-target base transceiver station in said network.

1 17. The method as set forth in Claim 15, further comprising
2 the step of:

3 sending said symbol from each said non-target base
4 transceiver station to said target base transceiver station.

1 18. The method as set forth in Claim 15, further
2 comprising:

3 decoding said symbols received from each said non-
4 target base transceiver station.

1 19. The method as set forth in Claim 15, further
2 comprising:

3 responsive to a high error count, prompting said mobile
4 station to increase power.

1 20. The method as set forth in Claim 15, further comprising
2 the step of:

3 responsive to a low error count, prompting said mobile
4 station to decrease power.